

Notice of Allowability

Application No.

10/693,459

Examiner

Vincent E. Kovalick

Applicant(s)

KIM

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's preliminary amendment and RCE dated 3/23/07.
2. ☒ The allowed claim(s) is/are 27,28 and 31-45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's RCE and Preliminary Amendment dated March 23, 2007 in response to USPTO Notice of Allowance issued December 28, 2006.

The cancellation of claims 1-26, 29-30, and 46; the amendments to claims 27, 40 and 43 have been noted and entered in the record. The application remains in a condition for allowance reflecting the currently amended version of independent claims 27, 40 and 43..

Allowable Subject Matter

2. Claims 27-28 and 31-45 are allowed.

3. The following is an examiner's statement of reasons for allowance.

Relative to claim 27, the major difference between the teachings of the prior art of record (USP 5,523,187, Shin; USP 5,847,797, Van Dijk and USP 5,909,035, Kim) and that of the instant invention is that said prior art of record **does not teach** a first gate driving signal transmission pattern formed on the first substrate and in electrical communication with the plurality of gate lines for transferring gate signals, wherein the first gate driving signal transmission pattern includes: an input terminal being formed substantially adjacent to a data line group and being in electrical communication with a first external device; an output terminal being formed substantially adjacent to a gate line group and being in electrical communication with a gate on/off voltage generating unit connected to the plurality of gate lines; and a main signal pattern arranged between and in electrical communication with the input terminal and the output terminal.

Regarding claim 40, the major difference between the teachings of the prior art of record and that of the instant invention is that said prior art of record **does not teach** a first signal transmission pattern formed in a peripheral region of the first substrate and in electrical communication with an external device, and including an input terminal formed substantially adjacent to a data line group and an output terminal formed substantially adjacent to a gate line group, wherein the first signal transmission pattern transmits a

Art Unit: 2629

gate signal to a gate on/off voltage generating unit connected to the gate line group; and a second signal transmission pattern formed along an edge portion of the first substrate, wherein the second signal transmission pattern transmits the gate signal to a second gate on/off voltage generating unit connected to the gate line group.

Regarding claim 43, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** a flat panel display comprising: a first substrate; a second substrate arranged over the first substrate, wherein the first substrate includes a peripheral region arranged around a display region; a tape carrier package (TCP) including a data driver integrated circuit (IC), wherein the tape carrier package (TCP) is arranged on a portion of a printed circuit board (PCB) and an external device on the PCB generates data signals and gate signals; a first pattern formed in a peripheral region of the first substrate and in electrical communication with the external device, wherein the first line transmits the gate signals to a gate on/off voltage generating unit arranged on a second tape carrier package (TCP); and a second pattern formed along an edge portion of the first substrate which transmits the gate signals to a second gate on/off voltage generating unit.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	5,701,167	Yamazaki
U. S. Patent No.	5,592,199	Kawaguchi et al.
U. S. Patent No.	5,565,885	Tamanoi
U. S. Patent No.	4,458,987	Sasaki et al.

Art Unit: 2629

To Respond

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is 571-272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vincent E. Kovalick
April 4, 2007



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600